THE Fats and Oils ... SITUATION

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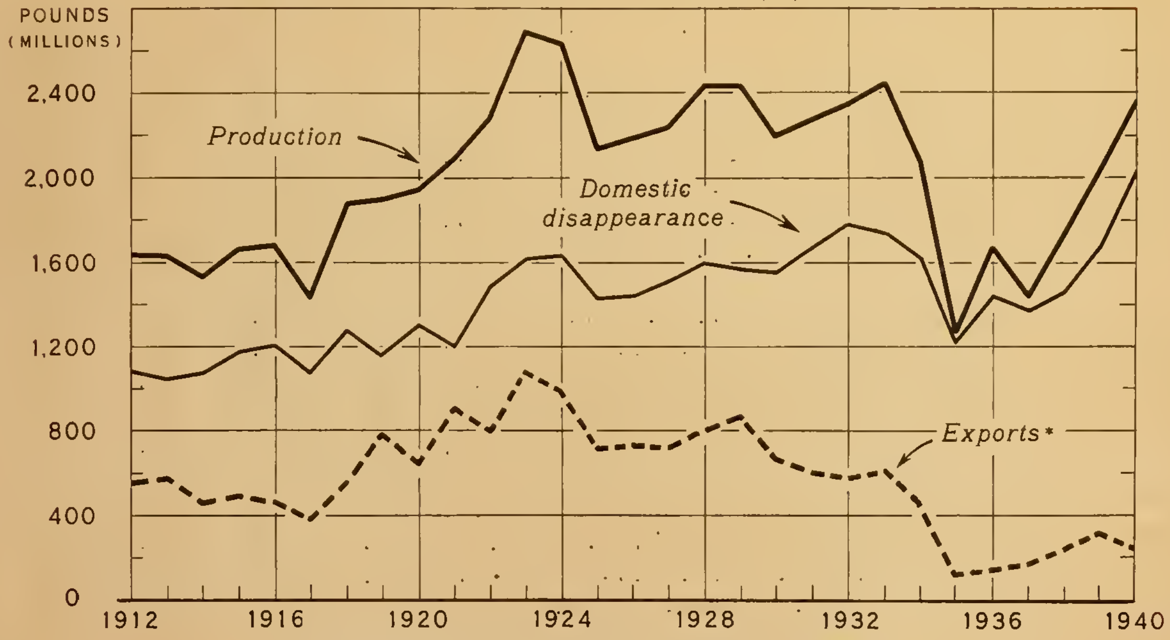
IN THIS ISSUE:
WESTERN HEMISPHERE SUFFICIENCY IN FATS

LARD: PRODUCTION, DISAPPEARANCE, AND EXPORTS, UNITED STATES, 1912-40



DATA FOR 1939 ARE PRELIMINARY; 1940 PARTLY ESTIMATED
* INCLUDING SHIPMENTS TO UNITED STATES TERRITORIES

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LARD PRODUCTION HAS INCREASED TO ABOUT THE PRE-DROUGHT (1924-33) LEVEL. BUT BECAUSE OF INCREASED COMPETITION FROM VEGETABLE OILS AND WHALE OIL ABROAD, WAR-INDUCED RESTRICTIONS OF PURCHASES BY THE UNITED KINGDOM, AND THE BLOCKADE OF MOST OF CONTINENTAL EUROPE, EXPORTS HAVE REMAINED SMALL. A RECORD QUANTITY OF LARD WILL BE CONSUMED DOMESTICALLY THIS YEAR AT LOW PRICES. IF THE WAR IN EUROPE CONTINUES, A FURTHER DECLINE IN EXPORTS MAY TAKE PLACE IN 1941. BUT LARD PRODUCTION IN 1941 WILL BE SOMEWHAT SMALLER THAN IN THE CURRENT YEAR.

Table 1.- Price per pound of specified fats and oils, and oil-bearing materials, August 1938 and 1939, and June-August 1940

Item	Aug.		1940		
	1938	1939	June	July	Aug. 1/
Fats and oils:	Cents	Cents	Cents	Cents	Cents
Butter, 92-score, Chicago	25.5	23.5	26.3	26.5	27.0
Oleomargarine, dom. veg., Chicago	16.4	14.5	15.0	15.0	14.8
Compounds (animal and veg. cooking fats), Chicago	10.6	8.8	9.2	9.2	9.0
Lard, prime steam, tierces, Chicago	8.1	5.6	5.5	5.8	4.9
Lard, refined, tubs, (cartons) Chicago 2/	9.0	6.4	6.2	6.2	6.1
Oleo oil, extra, tierces, Chicago	9.4	6.9	7.0	7.0	7.0
Oleostearine, bbls., N. Y.	8.2	5.6	5.8	5.5	5.2
Corn oil, crude, tanks, f.o.b. mills	7.9	5.1	5.5	5.4	5.3
Corn oil, refined, bbls., N. Y.	10.4	7.8	8.4	8.4	7.9
Cottonseed oil, crude, tanks, f.o.b. S.E. mills	6.9	4.5	5.1	5.4	4.8
Cottonseed oil, p.s.y., tank cars, N. Y.	8.1	5.5	6.0	6.0	5.6
Peanut oil, crude, tanks, f.o.b. mills	7.1	5.0	5.7	5.8	5.4
Peanut oil, dom. refined, bbls., N. Y.	10.6	8.6	8.9	8.9	8.7
Soybean oil, crude, tank cars, midwestern mills	5.7	4.2	4.7	4.7	4.4
Soybean oil, refined, drums, N. Y.	8.4	6.7	7.3	7.1	6.9
Babassu oil, tanks, N. Y.	6.4	5.8	5.9	6.0	5.9
Coconut oil, crude, tanks, f.o.b. Pacific Coast 3/	6.0	5.6	5.5	5.5	5.3
Coconut oil, edible, tanks, N. Y.	8.2	7.6	7.0	4/7.0	6.8
Olive oil, edible, drums, N. Y.	25.1	25.1	---	30.7	31.6
Olive-oil foots, prime, drums, N. Y.	7.7	6.8	9.1	9.0	8.7
Palm oil, Niger, crude, drums, N. Y. 3/	6.7	6.6	7.5	7.4	6.8
Palm oil, Sumatra, bulk, N. Y. 3/	6.0	5.6	5.5	5.4	5.2
Rape oil, refined, bbls., N. Y.	4/10.3	4/10.9	15.0	15.0	15.0
Sesame oil, refined, drums, N. Y.	10.5	9.2	16.0	16.0	16.0
Teaseed oil, crude, drums, N. Y.	8.0	10.3	12.5	12.5	12.5
Tallow, inedible, Chicago	5.1	4.0	3.8	3.8	3.2
Grease, A white, Chicago	5.3	4.1	3.8	3.8	3.2
Menhaden oil, crude, tanks, f.o.b. Baltimore	4.0	3.2	4.7	4.7	4.7
Sardine oil, crude, tanks, Pacific Coast	4.0	3.1	5.4	5.0	4.9
Whale oil, refined, bleached winter, drums, N.Y.	8.6	4/7.6	9.5	9.5	9.5
Linseed oil, raw, tank cars, Minneapolis	7.9	8.1	9.3	8.7	7.9
Linseed oil, raw, drums, carlots, N. Y.	8.4	8.7	10.0	9.3	8.8
Perilla oil, drums, N. Y.	4/10.7	4/12.3	---	18.8	17.7
Oiticica oil, drums, N. Y.	11.2	17.4	17.5	18.0	18.0
Tung oil, drums, N. Y.	14.0	22.0	24.0	25.6	25.8
Castor oil, dehydrated, drums, carlots, N. Y.	---	---	16.7	15.7	14.0
Castor oil, No. 3, bbls., N. Y.	9.2	8.2	12.8	12.2	11.2
Cod-liver oil, med. U.S.P. bbls., N.Y. (dol. per bbl.)	26.5	21.0	66.2	67.5	67.5
Oil-bearing materials:					
Copra, bags, f.o.b. Pacific Coast	1.9	1.6	1.6	1.6	1.4
Cottonseed, Dallas (dol. per ton)	22.9	15.7	22.0	20.8	19.5
Flaxseed, No. 1, Minneapolis (per bu.)	173.0	154.0	178.0	158.0	150.0
Peanuts, shelled, Runners No.1, f.o.b. S.E. mills	5.1	5.4	4.8	4.7	4.7
Soybeans, No. 2 Yellow, Chicago (per bu.)	86.0	5/	81.0	82.0	81.0

Compiled from Oil, Paint and Drug Reporter, The National Provisioner, Chicago Daily Trade Bulletin, Minneapolis Daily Market Record, and reports of the Agricultural Marketing Service and Bureau of Labor Statistics. Prices quoted include excise taxes and duties where applicable. 1/ Preliminary. 2/ Beginning July 1940 reported in 1-pound cartons. 3/ 3-cent processing tax added to price as originally quoted. 4/ Revised. 5/ No quotations.

THE FATS AND OILS SITUATION

Summary

The record large production of fats and oils in the United States, together with the marked shrinkage in export outlets for lard, has tended to depress prices of fats and oils in recent months despite improvement in domestic demand. Prices for most fats in August were lower than in July. And except for butter and marine oils, prices for domestic fats, coconut oil, and palm oil were near or below the relatively low levels of August 1939.

Supplies of domestically produced fats in the 1940-41 marketing season are expected to be slightly less than the large supplies of 1939-40. Lard and grease production probably will be substantially smaller than a year earlier, and tallow production also may be reduced. Production of soybean oil and peanut oil, on the other hand, is likely to be increased. The total supply of cottonseed oil probably will be little changed, with increased production being about offset by reduced stocks.

Imports of fats, oils, and oil-bearing materials have been smaller so far in 1940 than a year earlier, chiefly because of the prevailing large supplies and low prices for domestic fats. No material increase in imports seems likely so long as prices for domestic fats continue low.

Domestic demand for food and soap fats, and for drying oils, is expected to be stronger in 1940-41 than in 1939-40, mainly as a result of increased industrial and building activity, arising in part from the defense program. But if the British blockade of continental European markets is continued, abnormally large supplies of such foreign items as coconut oil and copra, palm oil, palm kernels, and flaxseed will remain available for

shipment to the United States. Under such circumstances, any rise in prices for domestic fats would be limited by increased imports. Nevertheless, some improvement in prices for lard, tallow, and greases seems to be indicated on the basis of the prospective domestic supply and demand situation.

The farm price of cottonseed was higher in August this year than last. Last fall, however, following the outbreak of war in Europe, prices rose fairly sharply. With an increased domestic supply of cottonseed, reduced exports of cake and meal, and increased supplies of peanut and soybean products, as well as linseed meal, no substantial gain in cottonseed prices is now in prospect, despite the improvement expected in domestic demand conditions.

The United States flaxseed crop for 1940 is reported to be of near-record size. Flaxseed import requirements for the 1940-41 season probably will be much below average, even though crushings may be increased. South American supplies of flaxseed are now seasonally small. If the war in Europe continues, such supplies may become burdensome next winter when the new South American crop is harvested. The domestic farm price of flaxseed was about the same in August this year as last, but was somewhat below the average for the 1939-40 marketing season. Present indications are that the average price for 1940-41 will be lower than that of a year earlier. But with increased marketings, the total cash income from the 1940 crop may be greater than that from the 1939 crop.

REVIEW OF RECENT DEVELOPMENTS

Prices of fats and oils again decline

Prices of most fats and oils declined further in August from the relatively low levels reached in July. Lard, inedible tallow, and greases showed the most pronounced reductions for the month. Butter prices advanced seasonally in August.

Prices of domestic vegetable oils in August were equal to or slightly higher than those of a year earlier. And prices of butter and marine oils were considerably higher. But the average price of prime steam lard at Chicago, at 4.9 cents per pound, was the lowest since April 1933; and prices of grease (A white) and inedible tallow, at 3.2 cents per pound, were the lowest since March 1934.

East Indian palm oil and Philippine coconut oil were somewhat lower priced in August this year than last. However, prices for other imported oils were substantially higher than a year earlier, chiefly because of difficulties in obtaining supplies from Europe and East Asia. Among the imported items which made pronounced price gains during the past year were cod-liver, sesame, perilla, tung, castor, rape, olive, and teaseed oils. Wholesale prices of cod-liver oil in August were more than 200 percent higher than they were a year earlier; increases for other items ranged roughly from 20 to 75 percent.

Large supplies, reduced exports mainly responsible for low prices of domestic fats

Production of fats and oils in the United States for the calendar year 1940 is expected to be the largest for all years on record. Factory production during the first 6 months of the year was reported to be 11 percent larger than in the corresponding period of 1939. Lard, inedible tallow and greases, and soybean oil accounted for most of the increase.

Total production of tallow, greases, and soybean oil will be of record proportions this year. Lard production, however, while much larger than that in any of the past 6 years, probably will be no larger than the average for the 10 pre-drought years, 1924-33. The supply of lard available for domestic consumption in 1940, nevertheless, is by far the largest on record and is approximately 25 percent greater than average consumption for the pre-drought period. Reduced exports of lard are mainly responsible for this situation. (See cover chart.) The reduction in exports has been brought about largely by increased competition from hardened vegetable oils and whale oil in European markets in recent years, the present restrictive nature of British buying policy, and the blockade of most of continental Europe.

Domestic demand for food and soap fats, reflecting the improved status of industrial activity, is now stronger than it was a year ago. But the large domestic production of fats, together with the loss of exports, has served to keep prices of domestic fats at a relatively low level. Another factor affecting prices of domestic fats is the potentially large supply of foreign fats and oils available for United States consumption. The Philippine Islands and the Netherlands East Indies have been especially hard hit by the closing of European markets to world trade. Large supplies of copra and coconut oil, palm oil and palm kernels, which under normal conditions would be shipped to Europe, have been "backed up" in those countries, with the result that prices of such commodities are now at low levels. With supplies large and prices low for domestic fats, United States imports of most fats and oils have been somewhat smaller so far in 1940 than in 1939. But any pronounced gain in prices in the United States probably would result in increased imports, which in turn would have the effect of limiting the price rise.

Improved domestic demand, little change in total supplies indicated

Further improvement in domestic demand for fats is expected to develop during the next year with continued expansion in industrial activity, resulting in part from the Defense Program. Total supplies of domestically-produced fats probably will be slightly smaller in the 1940-41 marketing season than in 1939-40.

Lard and grease production in 1940-41 may be reduced as much as 10 percent from the 1939-40 levels as a result of the smaller pig crop this year. With fewer fat cattle indicated for market in 1941 than in 1940, tallow production also may be smaller. Factory stocks of cottonseed oil were indicated to be about 100 million pounds less on August 1 this year than last. But with a larger cotton crop, the production of cottonseed oil in the current season may be increased by an amount about equal to the decrease in stocks.

Partly offsetting the reductions in lard, tallow, and greases, there probably will be an increase in output of soybean and peanut oils. The magnitude of the increases for these items will depend largely on the outturn of the domestic soybean and peanut crops this year, and on developments in the export situation for soybeans. At the present time, it appears that the reduction in supplies of lard, greases, and tallow will exceed the indicated increases for soybean and peanut oils.

Under ordinary circumstances, improvement in domestic demand, with some reduction in total supplies, would bring about fairly substantial gains in prices. But so long as the British blockade is continued, with abnormally large supplies of foreign fats remaining available for shipment to the United States, prices of domestic fats are not likely to rise greatly. Nevertheless, some improvement in prices seems to be indicated for the next year, particularly for lard, tallow, and greases.

New lard definitions established

The Secretary of Agriculture on August 14 signed an order establishing new definitions for meat food products which may be sold in interstate and foreign commerce as "lard" and "rendered pork fat." The order will be enforced under the Meat Inspection Act administered by the Bureau of Animal Industry, and becomes effective November 1, 1940.

The new definitions provide that "lard" produced under Federal inspection be made from selected fresh, fatty tissues from healthy hogs with or without lard stearine or hardened lard. Edible pork fat not measuring up to the definition of lard, such as head fat, scrap fat, pressings and the like, may be processed and sold as rendered pork fat.

The chief purpose of the new order is to increase consumer protection under the Meat Inspection Act by establishing uniformity and freshness of ingredients processed and sold as lard. It is estimated that not more than 15 percent of the federally inspected products now sold as lard will fail to qualify as lard under the new definitions.

THE COTTONSEED SITUATION

The supply of cottonseed for the 1940-41 season is estimated at 5.7 million tons compared with 5.4 million tons a year earlier and an average of 6.2 million tons for the 10 years 1928-37. Mill stocks of cottonseed on August amounted to only 39,000 tons, less than a third of the quantity on hand a year earlier. But production of cottonseed, as indicated by conditions September 1 is expected to total about 5,671,000 tons, or more than 400,000 tons more than in the 1939-40 season.

Despite the increased production of cottonseed, the supply of cottonseed oil probably will be no greater this season than last. Mill stocks of oil (crude basis) on August 1 were approximately 100 million pounds less than a year earlier. And the increase in oil production, assuming that about the same proportion of the total seed supply will be crushed as in the 1939-40 season, probably will not be in excess of this amount.

Table 2.- Cottonseed and cottonseed oil: Supply, net trade and disappearance, United States, average 1928-37, annual 1938-40
(Net exports are indicated by a minus sign)

Year beginning August	Cottonseed				Cottonseed oil, crude basis				
	Mill stocks Aug.1	Production	Total supply	Crushings	Stocks Aug.1	Production	Domestic supply	Net imports or net exports	Domestic disappearance
	1,000 tons	1,000 tons	1,000 tons	1,000 tons	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.
Average 1928-37	103	6,136	6,239	4,709	498	1,466	1,964	35	1,483
1938	337	5,310	5,647	4,471	559	1,409	1,968	59	1,352
1939	121	5,260	5,381	4,148	674	1,325	1,999	- 7	1,422
1940 1/	39	2/5,671	5,710	3/4,400	570	3/1,400	3/1,970		

Data on stocks, crushings, and oil production compiled from reports of the Bureau of the Census; data on trade compiled from records of the Bureau of Foreign and Domestic Commerce; production of cottonseed as reported by the Agricultural Marketing Service. Domestic disappearance computed from data on production, stocks, and trade.

1/ Preliminary.

2/ Indicated September 1.

3/ Estimated, assuming same proportion of the supply of cottonseed will be crushed as in 1939-40.

Stocks of cottonseed cake and meal, and hulls were considerably smaller on August 1 this year than last. Hence, even if production of these commodities should be increased this season, total supplies probably would be only slightly larger than a year earlier. Stocks of linters on August 1, totaling 133,000 bales, were approximately 346,000 bales smaller than stocks on August 1, 1939. And the total supply of linters for the current season may be smaller than in 1939-40.

The average price received by farmers for cottonseed in mid-August, at $21.16 per ton, was approximately $5 per ton higher than in mid-August 1939 and was about equal to the weighted average price for the 1939-40 marketing season. Prices rose fairly sharply in the fall and winter last year, following the outbreak of war in Europe but have declined in recent months. The domestic demand for cottonseed products, especially for oil and linters, probably will continue to be stronger in the current marketing year than it was a year ago. But foreign demand is likely to remain weak so long as the blockade of most of the European continent is enforced. No sharp rise in prices of cottonseed, such as took place last fall, is likely to occur under such circumstances.

The value of cottonseed sold by farmers, including the quantity exchange for meal, amounted to $88,175,000 for the 1939 crop compared with $92,836,000 for the 1938 crop, according to estimates of the Agricultural Marketing Service. Total sales in 1940-41 probably will be larger than in 1939-40. But present indications are that prices in the next few months, when most of the current crop will be sold, may not average as high as those in the fall and early winte of 1939.

THE FLAXSEED SITUATION

United States production of flaxseed for 1940, estimated at 30.7 million bushels, is the largest since 1924 and is more than equivalent to total crushings of domestic and imported seed in the 1939-40 marketing year. Some increas in crushings is anticipated for the current season, in view of the rising trend in building activity and the consequent improvement in demand for linseed oil for use in paints. Stocks of flaxseed on July 1, totaling 3.9 million bushels, were nearly 2 million bushels larger than a year earlier.

The domestic supply (production plus stocks) of flaxseed in the current season is expected to total more than 34 million bushels, which probably will leave little room for imports. Net imports of flaxseed amounted to 13.2 millio bushels in the 1939-40 season compared with 18.7 million bushels a year earlier and an average of 16.4 million bushels for the previous 10 years.

Table 3.- Flaxseed, and linseed oil: Supply, net trade, and disappearance, average 1928-37, annual 1938-40
(Net exports are indicated by a minus sign)

Year beginning July	Flaxseed					Linseed oil				
	Est. total stocks July 1 1/	Production	Net imports	Total supply	Crushings	Stocks July 1	Factory production	Net imports or net exports	Total supply	Domestic disappearance
	1,000 bu.	1,000 bu.	1,000 bu.	1,000 bu.	1,000 bu.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.
Average 1928-37	3,126	11,943	16,360	31,429	26,970	122	508	2	632	514
1938	2,199	8,152	18,744	29,095	25,569	146	502	- 1	647	516
1939	2,296	20,330	13,212	35,838	30,076	130	579	- 5	704	572
1940 2/	3,911	3/30,662				133				

Data on factory stocks, crushings, and oil production compiled from reports of the Bureau of the Census; trade, from records of the Bureau of Foreign and Domestic Commerce; commercial and farm stocks, and production of flaxseed from reports of the Agricultural Marketing Service. Domestic disappearance of oil computed from data on production, stocks, and trade.

1/ Total of factory, commercial, and farm stocks. 2/ Preliminary.
3/ Indicated September 1.

Although supplies of flaxseed in Argentina and Uruguay are now seasonally small, the usual export markets, aside from the United States, are largely cut off by the British blockade of much of Europe. If the war in Europe is continued, South American supplies of flaxseed are likely to become burdensome next winter when the new crop is harvested. New crop flaxseed is now being seeded in South America, but it is too early to hazard an estimate of the probable outcome of the crop.

Factory production and domestic consumption of linseed oil increased fairly sharply in 1939-40, chiefly in response to the improved demand for paints, but to some extent also because of reduced supplies of perilla oil resulting from the short crop of perilla seed in Manchuria in 1939.

Further improvement in domestic demand for paints is in prospect for the current marketing year. But the effect of this improvement on prices of both flaxseed and linseed oil is likely to be outweighed by developments in Europe. A continuation of the war, with restricted demand for flaxseed on the Continent probably would mean that prices would remain low. The reopening of continental European markets to world trade, on the other hand, probably would be accompani by some stimulation in prices.

Prices received by farmers for flaxseed in the United States averaged $1.36 per bushel in mid-August this year. This price was about the same as in August 1939 but was 10 cents lower than the average for the 1939-40 marketing year and was considerably below the average for the previous 10 years. Present indications are that the average price for the 1940-41 season will be somewhat lower than a year earlier. But with larger marketings, the total cash income from the crop may be somewhat greater this season than last.

STATUS OF THE WESTERN HEMISPHERE WITH REGARD TO SUFFICIENCY IN FATS

The Western Hemisphere is nearly self-sufficient with regard to fats and oils as a whole, with a net import requirement which ordinarily amounts to 2 percent or less of total consumption. However, there are large hemisphere surpluses for some items, notably flaxseed, lard, tallow, soybeans, cottonseed, and cottonseed oil; while there are substantial deficits for other items, including coconut oil and copra, palm oil, tung oil, olive oil, peanut oil, perilla oil, and fish-liver oils.

Present hemisphere surpluses are sold mostly in the European market. The imported items are obtained largely from the Far East. Most of the coconut oil and copra is supplied by the Philippine Islands and the East Indies. Imports of tung oil and peanut oil are furnished chiefly by China. Shipments of perilla oil originate in Kwantung and Japan. Palm oil is obtained both in the East Indies and West Africa. Olive oil and part of the fish-liver oils are imported from Europe. Iceland and Japan also are sources of supply for fish-liver oils.

Hemisphere self-sufficient in table and cooking fats, deficient in salad and edible soap oils

As indicated in table 4, the Western Hemisphere normally produces ample supplies of butter, lard, cottonseed oil, soybean oil, oleo oil, and oleostearin for use as table and cooking fats, but is deficient in production of corn oil, olive oil, sesame oil, and teaseed oil, items which are used chiefly as salad and cooking oils. The hemisphere also is deficient in production of edible soap oils, notably coconut oil, palm-kernel oil, and palm oil.

In an emergency, the deficiency in salad and cooking oils might be remedied by substituting much of the cottonseed oil and soybean oil now used in vegetable cooking fats for this purpose. This procedure would involve some change in taste, but otherwise would cause no particular difficulty. The surplus of oleo oil and oleostearine could be used in the manufacture of cooking fats. And part of the lard surplus could be used to replace the cottonseed and soybean oils diverted from the cooking fat to the salad-oil market. The remainder of the lard surplus probably could be used for soap, taking the place in large measure of palm oil now imported.

The only serious deficit problem in the edible fat field exists in the "lauric-acid" oils - coconut, palm-kernel, and babassu - which aside from their usefulness for food are almost essential in the manufacture of quick-lathering, hard soaps. Some copra is produced in Mexico, Brazil, and to a minor extent in other Latin-American countries. But copra and coconut oil are imported by practically all American countries. Palm-kernel oil also is imported. Babassu nut and kernels, a Brazilian product, have not as yet been produced in sufficient volume to provide a large extra-hemisphere surplus.

The hemisphere deficit in the "lauric-acid" oils amounts to about 800 million pounds annually. This deficit may be reduced in future years by an increase in the harvest of wild babassu nuts in Brazil and cohune nuts in souther Mexico and Central America, and by an expansion of existing palm and coconut plantations in northern Brazil and other tropical regions. The former procedur involves considerable difficulties as to labor for harvesting, and much capital is needed to improve the primitive transportation facilities now existing, as well as for the establishment of processing plants. However, the wealth represented by these wild nuts, at present largely untapped, is very great. In addition to the oil, the kernels yield a high-protein cake useful for livestock feeding. And the outer husks are valuable for the production of a high-grade charcoal, with several important industrial chemicals as byproducts.

Production of flaxseed more than sufficient for hemisphere needs, but output of faster-drying oils is deficient

The Western Hemisphere produces more flaxseed than it uses. On the other hand, hemisphere production of tung oil and perilla oil, which are superior to linseed oil in drying qualities, is almost negligible. Argentina and Uruguay are the surplus flaxseed-producing nations. The United States and Canada produce fairly large quantities of flaxseed, but not enough for their own needs. Production in the United States fluctuates widely from year to year partly in response to changes in the flaxseed-wheat price ratio.

Linseed oil may be substituted to some extent for perilla oil, but only to a very slight extent for tung oil, which possesses almost unique water-resistant characteristics. Tung oil in recent years has become important in the manufacture of high-quality varnishes and for many industrial purposes. Some tung oil is produced along the Gulf Coast of the United States and in Brazil. But the bulk of the supply still comes from China.

Oiticica oil and dehydrated castor oil possess many of the properties of tung oil, and may be used to some extent as substitutes. Oiticica oil is obtained from the nuts of the wild oiticica tree found in northeastern Brazil. Most of the stands of the oiticica tree are now being exploited, and it is not likely that production of oiticica oil could be expanded much beyond the present level. Castor beans are produced on a large scale from both wild and cultivated plants in Brazil. They can be grown also in the United States, but productio costs are high.

Perilla seed, primarily a Manchurian product, has been grown experimentally in the United States. The chief obstacle to large-scale production in this country arises from the difficulty in harvesting by mechanical means the numerous seeds, which tend to scatter on ripening. Perilla oil is not a tung-oil substitute, but is superior to linseed oil as a general drying oil, and is particularly useful for blending with semi-drying oils such as soybean oil and cottonseed oil.

Hemisphere deficient in medicinal fats

A large proportion of the supply of fish-liver oils of high-vitamin potency for medicinal uses and poultry feeds is obtained from non-hemisphere sources. Wool grease, useful chiefly as a base for salves and ointments, as a lubricant, and as a source of vitamin D, also is a deficit item.

The production of fish-liver oils by Canada and Newfoundland undoubtedly could be expanded to some extent. Production in the United States probably could also be expanded. Fish-liver oils produced domestically are mainly a by-product of the fish canning industry. Rendering plants and boats specifically designed for the production of such oils probably would be needed.

Wool grease is a byproduct of the wool-scouring industry. Output may be increased only as the quantity of wool scoured is increased. Large quantities of raw wool are now shipped from South America to Europe.

Supply of lubricating oils ample

Hemisphere supplies of lubricating oils (including both mineral oils and fats) are ample for most needs. However, fairly large quantities of rape oil are imported. Blown rape oil, like castor oil, is highly viscous and is particularly well suited for use in high-speed internal combustion motors. Rape oil is resistant to the action of salt air and water, and hence is widely used in marine motors. Some rapeseed is produced in Argentina, but production to date has been small.

ROBERT M. WALSH.

Table 4.- Western Hemisphere: Estimated net export and net import balances for specified fats, oils, and oil-bearing materials

Commodity	Net exports	Net imports	Countries showing net exports	Countries showing net imports
	1,000 lb.	1,000 lb.		
Used mainly for table and cooking fats -				
Butter	7,944	--	Argentina 80%, Canada 17, Cuba 2, Uruguay 1	
Cottonseed (oil equiv., 15%)	26,441	--	Brazil 63%, Peru 26, Argentina 5, Paraguay 4, Ecuador 1, Nicaragua 1.	
Cottonseed oil	38,217	--	Brazil, 80%, United States 16, Mexico 3, Peru 1.	
Lard	475,000	--	United States 95%, Canada 3, Argentina 2.	
Oleo stock and derivatives	56,505	--	Argentina 89%, United States 11.	
Peanut oil	--	128,072		Canada 60%, United States 39, Uruguay 1.
Soybeans (oil equiv., 14%)	86,689	--	United States 100%.	
Soybean oil	--	10,396		Cuba 57%, Canada 28, Chile 15.
Total	690,796	138,468		
Used mainly for salad and cooking oils -				
Corn oil	--	26,308		United States 100%.
Olive oil	--	176,497		United States 55%, Argentina 21, Cuba 7, Brazil 6, Uruguay 4, Canada 2, Mexico 2, Chile 1, Venezuela 1, Others 1.
Sesame seed (oil equiv., 45%)	--	31,427		United States 100%.

Continued -

Table 4.- Western Hemisphere: Estimated net export and net import balances for specified fats, oils, and oil-bearing materials - Continued

Commodity	Net exports	Net imports	Countries showing net exports	Countries showing net imports
	1,000 lb.	1,000 lb.		
Sesame oil	--	12,618		United States 99%, Canada 1.
Teaseed oil	--	15,751		United States 100%.
Total	--	262,601		
Used mainly for soap Slow lathering -				
Fish oils	19,084	--	Canada 89%, United States 8, Argentina 3.	
Palm oil	--	409,304		United States 81%, Canada 15, Cuba 4.
Whale and seal oil	--	23,613		United States 100%.
Stearine, animal 1/	10,031	--	Argentina 94%, Uruguay 6.	
Tallow 1/	81,752	--	Argentina 84%, Uruguay 9, Brazil 6, Canada 1.	
Total	110,867	432,917		
Used mainly for soap Quick-lathering -				
Babassu nuts (oil equiv., 63%)	348	--	Brazil 100%.	
Coconut oil	--	383,689		United States 87%, Canada 10, Argentina 1, Cuba 1, Others 1.
Copra (oil equiv., 63%)		359,126		United States 82%, Mexico 15, Colombia 3.
Palm kernels (oil equiv., 45%)	4,235	--	Brazil 100%.	
Palm-kernel oil	--	55,159		United States 100%.
Total	4,583	797,974		

Continued -

Table 4.- Western Hemisphere: Estimated net export and net import balances for specified fats, oils, and oil-bearing materials - Continued

Commodity	Net exports	Net imports	Countries showing net exports	Countries showing net imports
	1,000 lb.	1,000 lb.		
Used mainly for drying purposes -				
Flaxseed (oil equiv., 33%) ...	830,454	--	Argentina 96%, Uruguay 4.	
Linseed oil	--	11,286		Cuba 24%, Canada 22, Chile 11, Colombia 10, Mexico 9, Peru 7, Venezuela 7, Brazil 3, Ecuador 2, Panama 2, Argentina 1, Costa Rica 1, Salvador 1.
Oiticica oil	1,576	--	Brazil 100%.	
Perilla seed (oil equiv., 37%) ...	--	597		United States 100%.
Perilla oil	--	66,411		United States 100%.
Tung oil	--	134,307		United States 100%.
Total	832,030	212,601		
Used mainly for medicinal purposes				
Fish-liver oils ..	--	57,794		United States 94%, Canada 4, Argentina 1, Others 1.
Wool grease	--	4,669		United States 100%.
Total		62,463		

Continued -

Table 4.- Western Hemisphere: Estimated net export and net import balances for specified fats, oils, and oil-bearing materials - Continued

Commodity	Net exports	Net imports	Countries showing net exports	Countries showing net imports
	1,000 lb.	1,000 lb.		
Miscellaneous industrial oils -				
Castor beans (oil equiv., 42%) ...	46,417	--	Brazil 98%, Argentina 2.	
Castor oil	--	1,877		Canada 84%, Cuba 10, Mexico 2, Argentina 1, Costa Rica 1, Ecuador 1, Peru 1.
Neat's-foot oil ..	2,376	--	United States 35%, Brazil 28, Canada 26, Uruguay 11.	
Rapeseed (oil equiv., 35%) ...	--	6,568		United States 97%, Canada 3.
Rape oil	--	33,828		United States 100%.
Total	48,793	42,273		
Total, all commodities -	1,637,069	1,949,297		

The term "Western Hemisphere" applies here to Canada, Newfoundland, United States, and the 20 republics of Latin America.

Estimates are based on trade data compiled from official sources and the International Yearbook of Agricultural Statistics for the years 1935-38, with the following exceptions: Tallow, 1938 data; babassu nuts, 1936-39 data; soybeans, soybean oil, and oiticica oil, 1939 data; lard and cottonseed oil, estimates as of 1940, data for earlier years not being considered representative. Data are not complete for all commodities, since trade figures for some countries are not completely available. But the totals are believed to reflect the net hemisphere trading position fairly accurately.

1/ Mostly inedible.

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Table 5.- Oleomargarine: Production and materials used in manufacture, United States, July 1938 and 1939, May-July 1940

Item	July		1940 1/		
	1938	1939	May	June	July
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds
Production:					
Colored	104	103	181	282	208
Uncolored	25,418	19,160	24,496	19,570	21,812
Total 2/	25,523	19,262	24,676	19,852	22,021
Materials used:					
Oleo oil	1,090	859	933	900	1,123
Oleostearine	315	246	310	236	282
Lard, neutral	97	111	498	423	318
Oleo stock	166	57	91	70	96
Beef fat	---	12	---	---	---
Oleostearine oil	---	---	88	---	---
Total, animal	1,668	1,285	1,920	1,629	1,819
Cottonseed oil	8,181	5,522	8,468	7,392	8,526
Soybean oil	2,979	5,625	5,727	4,463	5,402
Peanut oil	290	186	133	137	65
Corn oil	2	18	48	10	---
Cottonseed stearine	---	---	---	2	1
Soybean stearine	---	---	1	1	---
Vegetable stearine	---	---	---	---	1
Total, domestic vegetable	11,452	11,351	14,377	12,005	13,995
Coconut oil	6,331	1,560	2,527	1,575	1,261
Babassu oil	1,086	1,332	962	683	595
Palm-kernel oil	263	---	---	---	---
Palm oil	---	---	---	3	---
Total, foreign vegetable	7,680	2,892	3,489	2,261	1,856
Total, fats and oils	20,800	15,528	19,786	15,895	17,670
Milk	4,787	3,870	4,691	3,811	4,264
Salt and other miscellaneous	1,143	906	1,074	878	973

Compiled from Internal Revenue records and Internal Revenue Bulletin.

1/ Preliminary.
2/ Total of unrounded numbers.